



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER
KENNEDY SPACE CENTER, FLORIDA 32899

REPLY TO
ATTN OF: AA-MFP-1 (73-12-9)

January 10, 1974

MEMORANDUM

TO: Distribution

FROM: AA/Manager, Sciences, Applications, Skylab and ASTP Programs

SUBJECT: Apollo/Soyuz Test Project (ASTP) Directive No. 3, dated
November 26, 1973, Subject: Technical Investigations

OMSF Apollo/Soyuz Test Project (ASTP) Directive No. 3 has been received by this office and a copy is transmitted for your information. A copy of my Briefing Note to the Center Director concerning this Directive is also included.

for *William H. Rock*
William H. Rock

Enclosures:

1. ASTP Directive No. 3
2. Briefing Note to CD

Distribution:

Apollo/Skylab Distribution M

Dr. Debus

DEC 18 1973

SUBJECT: Apollo/Soyuz Test Project (ASTP) Directive No. 3

This office has received and reviewed Apollo/Soyuz Test Project Directive No. 3, dated November 26, 1973. This Directive is the ASTP counterpart of Apollo Program Directive (APD) No. 55A, "Technical Investigations", dated December 30, 1970.

ASTP Directive No. 3 differs from Apollo APD No. 55A in that references to the Apollo lunar mission have been replaced by ASTP references, and a category of technical investigations called "Supplementary Objectives" (involving joint agreement by the U. S. and the U.S.S.R.) has been added. This new Directive will be given standard distribution to heads of primary and secondary organizations. Copies of this briefing note will be distributed with copies of ASTP Directive No. 3.

This Directive places no new requirements on the Center.

W. H. Rock
for William H. Rock

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APOLLO/SOYUZ TEST PROJECT (ASTP) DIRECTIVE NO. 3

TO: DISTRIBUTION

FROM: Charles M. Lee
PROGRAM DIRECTOR, ASTP

SUBJECT: TECHNICAL INVESTIGATIONS

OFFICE OF PRIME RESPONSIBILITY: MAO

ACTION: Organizations proposing technical investigations on the ASTP mission will classify, process, and plan those investigations as described herein

REFERENCES: (a) NMI 7100.1 "Conduct of Space Science Program"

(b) APD 43A "Apollo Mission Implementation Plan"

I. PURPOSE

This directive sets forth the procedures for review and approval of technical investigations to be conducted on the ASTP mission. It defines criteria for classification of technical investigations such as Experiments, Detailed Objectives, Operational Tests, or Inflight Demonstrations. It establishes the procedures for incorporating these activities into timelines of technical investigation accomplishment. For Experiments, it amplifies NMI 7100.1 (reference (a)) for procedures to be followed within the ASTP Program.

II. SCOPE AND APPLICABILITY

- A. All technical investigations performed on the ASTP mission will be classified as Experiments, Detailed Objectives, Operational Tests, or Inflight Demonstrations.
- B. This directive applies to the ASTP Program Office at the Office of Manned Space Flight and the Manned Space Flight Centers.

III. DEFINITIONS

- A. Primary Objective - A statement of the primary purpose of the flight. When used in Center control documentation the Primary Objective(s) may not be modified, but may be amplified by Detailed Objectives.
- B. Supplementary Objective - A statement of those tasks that do not affect the achievement of the Primary Objectives of the mission. These tasks have been jointly agreed upon between the U.S. and U.S.S.R.

- C. Experiment - A technical investigation that supports science in general or provides engineering, technological, medical, or other data and experience for application to ASTP or other programs and is recommended by the Manned Space Flight Experiments Board and assigned by the Associate Administrator for Manned Space Flight to the ASTP Program for flight.
- D. Detailed Objective - A scientific, engineering, medical, or operational investigation that provides important data and/or experience for use in development of hardware, software, and/or procedures for application to space flight missions. Photographic Tasks, though reviewed by the Manned Space Flight Experiments Board, are not assigned as formal Experiments and will be processed as a Detailed Objective.
- E. Operational Test - A technical investigation that provides for the acquisition of technical data or evaluates operational techniques, equipment, or facilities but is not required by the objectives of the ASTP flight mission. An Operational Test does not affect the nominal mission timeline, adds no payload weight, and does not jeopardize the accomplishment of Primary Objectives, Experiments, or Detailed Objectives.
- F. Inflight Demonstration - A technical demonstration of the capability of an apparatus and/or process to illustrate or utilize the unique conditions of space flight environment. Inflight Demonstrations will be performed only on a non-interference basis with all other mission and mission related activities. Utilization, performance, or completion of these demonstrations will in no way relate to mission success.

IV. RESPONSIBILITY

A. OMSF

The ASTP Program Director will approve the assignment of all Experiments, Detailed Objectives, Operational Tests, and Inflight Demonstrations to the mission including the timeline planned for their accomplishment. The Director, ASTP Engineering (MAE) is responsible to the Program Director for reviewing and processing all Experiments and CSM Orbital Photographic Tasks through the Manned Space Flight Experiments Board, and for the coordination of internal review and approval within the Program Office. The ASTP Director of Operations (MAO) is responsible to the ASTP Program Director for coordinating internal review and approval of all Detailed Objectives, Operational Tests, and Inflight Demonstrations within the Program Office. The Director, ASTP Operations (MAO) is responsible to the Program Director for coordinating inclusion of all approved technical investigations (Experiments, Detailed Objectives, Operational Tests, and Inflight Demonstrations) in the mission timeline and documenting the investigations and their timeline assignment in the Mission Implementation Plan (reference (b)).

B. MSF Centers

Each center will process technical investigations as described in this directive. JSC will develop and maintain the investigation timeline as prescribed herein.

V. PROCEDURES

- A. Experiments - All Experiment proposals or requests will be processed through NASA Headquarters by the ASTP Director of Engineering (MAE). Following internal review and acceptance of a proposed Experiment, an Experiment Implementation Plan (EIP) and a Compatibility Analysis will be prepared for presentation to the Manned Space Flight Experiments Board. After an Experiment is recommended by the Manned Space Flight Experiments Board it will be assigned to the mission by the Program Director. The Experiment will then be identified in the Mission Implementation Plan (MIP).
- B. Detailed Objectives - Proposed Detailed Objectives will be submitted by the Center Program Office to the Program Director. Each proposal will consist of a brief general description of the objective, the time allocation estimated for its conduct, any special equipment or interface requirements, and justification for its implementation. The Detailed Objective proposal will be coordinated within the Program Office and with the cognizant Center(s) prior to approval by the Program Director and subsequent priority assignment. Approved Detailed Objectives will be identified in the MIP.
- C. Operational Tests - Proposals for performance of Operational Tests will be submitted by the Center Program Office to the Program Director. Each proposal will consist of a brief description of the Operational Test, justification for its implementation, and confirmation of non-interference with the mission. Approved Operational Tests will be identified in the MIP.
- D. Inflight Demonstrations - The Apollo Spacecraft Program Manager will be responsible for implementing Inflight Demonstrations subject to approval and flight assignment by the Program Director. The Apollo Spacecraft Program Manager will establish the requirements and interfaces necessary to successfully integrate assigned Inflight Demonstrations on a non-interference basis into the mission. He will be responsible for assuring that each assigned Inflight Demonstration meets all the requirements of the spacecraft, and will be the implementing Center's prime focal point for authoritative direction and information. The interface within the Program Office for coordina-

ting engineering details relative to these demonstrations will be the ASTP Engineering Director. Approved Inflight Demonstrations will be identified in the MIP.

VI. TIMELINE OF TECHNICAL INVESTIGATIONS

Mission assignment for all approved technical investigations will be determined by their relative importance and their adaptability to the overall mission timeline. Operational implementation planning for all investigations will be coordinated with the appropriate Center(s) for potential inclusion in a timeline of investigation accomplishment. Preliminary investigation timelines will be prepared by JSC as early as feasible for each mission and presented to the Program Director. The preliminary investigation timelines will then be published in the appropriate MIP to serve as a baseline for evaluating added technical investigation proposals. The timelines will be continually refined on the basis of simulation and training experience, but proposed major changes such as the reordering, addition, or deletion of activities must receive the concurrence of the Program Director's designated representative at either a JSC Program Office Mission Review or by written request. Proposed changes that require concurrence prior to convening a scheduled Mission Review will be processed by letter. Subsequent revision to the MIP will constitute Level I approval of investigation timeline changes.

VII. IMPLEMENTATION

This directive is effective upon receipt. The definitions herein take precedence over definitions published in other ASTP or Apollo documentation. This directive supercedes APD 55A dated December 30, 1970.